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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,017	03/31/2004	Bharat Lagu	PRD 2049 NP	1006
27777 7590 05/03/2007 PHILIP S. JOHNSON JOHNSON & JOHNSON ONE JOHNSON & JOHNSON PLAZA NEW BRUNSWICK, NJ 08933-7003			EXAMINER BERNHARDT, EMILY B	
			ART UNIT 1624	PAPER NUMBER
			MAIL DATE 05/03/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/815,017

Applicant(s)

LAGU ET AL.

Examiner

Emily Bernhardt

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 33 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/17/05</u> . | 6) <input type="checkbox"/> Other: _____  |

Applicant's election of I in the reply filed on 2/22/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicants state their intent to cancel claims 34-39. In response to this action a set of claims with status identifiers for each claim must be presented.

Claims 1-31 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. In claims 6-8, 19, 20, 22, 23, 25, 27, 29 and 31 it is not clear if the "X" choice is further limiting the claim(s) from which these claims depend or not. Note the wording "when..." and later "then...." .

2. Throughout the generic claims for the R4 choice, various moieties are recited with "carbonyl" modifying it. See carbonylalkyl, carbonylalkenyl and carbonylaryl groups. By standard convention in chemical nomenclature when complex moieties are recited, point of attachment is considered by way of the suffix ending such as arylcarbonyl which would indicate attachment is by way of the C(O). As the abovementioned groups have

carbonyl reversed, the groups are open-ended as there is no substituent on the carbonyl to satisfy valency requirements. As far as the examiner can determine there is nothing in the specification which further defines these moieties.

Claims 1-31 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specification provides no adequate support teaching how to use representative scope of instant elected piperazine compounds which can carry from a reading of the specification a huge array of aryl groups as well as heterocyclic groups and heteroaryl at X (choice ii), Y and R5 variables including optionally substituted groups thereon as described on pages 65-67. Compounds made do not remotely represent such a scope since all compounds made have the same substitution pattern at R5, i.e. having mainly the benzhydryl group, or similar groups embraced in claim 17. Rings at "X" covering the scope of claim 15 are represented. "Y" choice is always absent.

Thus, there is no reasonable basis for assuming that the myriad of remaining compounds which easily totals in the billions embraced by the generic claims will all share the same physiological properties since they are so structurally dissimilar as to being chemically and biologically non-equivalent and there is no basis in the prior art for assuming the same.

Note In re Surrey 151 USPQ 724 regarding sufficiency of disclosure for a Markush group. Also see MPEP 2164.03 for enablement requirements in cases directed to structure-sensitive arts such as the pharmaceutical art.

Also note the criteria for enablement as set out in In re Wands cited in MPEP 2164.01(a), August 2000 edition which include the following factors:

- 1.) Breadth of the claims- the claims cover compounds easily in the millions if not billions;
- 2.) Level of unpredictability in the art - the invention is pharmaceutical in nature involving inhibitory activity at the PLC family of proteins. It is well established that the "the scope of enablement varies inversely with the degree of unpredictability of the factors involved" and physiological activity is generally considered to be unpredictable. See In re Fisher 166 USPQ 18;

3) Direction or guidance- as stated above there are only a small number of compounds actually made which are much closer to each other than to remaining scope ;

4) State of the prior art- The compounds are piperazines with phenyl attachment at one end requiring an ortho N-ureido substituent with an additional carboxamido substituent as C(O)X and at the other terminus w an array of choices are permitted from unsubstituted alkyl to rings that can be mono- and polycyclic. Piperazine carbon atoms can also be further substituted with an assortment of substituted alkyl chains which include aryl and heteroaryls that can be further substituted as described in the specification . Note that DuBois's compounds, applied below, embrace a small part of applicants' genus and are taught for treating CCR-3-mediated diseases ;

5) Working examples- While test data has been presented it is limited to a narrow set of homogeneous compounds as described above and thus no clear evaluation of which functional groups at various positions out of the many claimed might affect potency to a large or small degree.

In view of the above considerations, this rejection is being applied.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over DuBois (US'073). DuBois is applied as of its earlier US provisional filing date which precedes applicants' effective filing date since relevant subject matter is described therein. It teaches very similar compounds for use as CCR-3 receptor antagonists. See general formula (I) in col.2 which includes optionally substituted phenyl as "A". Closest Compound is listed in columns 11-12, first species, and only differs in having H in place of instant "X-C(O)" group. However, note that DuBois teaches substitution on the phenyl ring at "A" as can be seen in cols. 2 and 7 which includes carbamoyl permitted herein. DuBois also teaches the presence of one or halos on the benzyl group corresponding to instant R5 and includes such as the preferred embodiments in col.13. thus claims 15-17 are also rejected herein. Thus it would have been obvious to one skilled in the art at the time the invention was made to modify the closest

compound pointed out above by modifying the phenyl ring with aforementioned carbamoyl on any available ring position and change the number or nature of halos on the benzyl ring and in so doing obtain additional compounds for the uses taught by the art in view of equivalency teaching outlined above outlined above.

Claim 32 is objected to for containing nonelected subject matter (see 5 species on p.139), but would otherwise be allowable if limited to elected subject matter of Group IA. DuBois is too diffuse to suggest the substitution pattern present in the first 2 species of claim 32 and does not at all suggest the R5 choices or X choices present in the remaining species.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Bernhardt whose telephone number is 571-272-0664.

If attempts to reach the examiner by telephone are unsuccessful, the acting supervisor for AU 1624, James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Emily Bernhardt  
Primary Examiner  
Art Unit 1624